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Eleanor Allen: On a Mission to Provide Safe Water for Everyone, Forever

Abstract

Eleanor Allen is a global water expert dedicated to helping millions of people access the safe and sustainable water and sanitation services needed to save lives, stay healthy, earn more money, and thrive. Eleanor is fiercely passionate about improving the state of the world with respect to water and sanitation. She has dedicated her career to this goal, first as a Peace Corps volunteer in the Dominican Republic, then as a consulting engineer (at CH2M/Jacobs and Arcadis), and now as the CEO of Water For People. Eleanor has lived and worked all over the world. As a professional civil engineer, business executive, and CEO, she has led large global and regional operations, managed projects and programs, developed business and raised funds, and designed water and wastewater treatment plants. Eleanor believes that societal change can be accelerated through social entrepreneurship and the efforts of organizations like Water For People. This article tells the story of Eleanor's inspirational life and career journey, provides technical aspects of her current work, and shares her encouraging message on living life with a purpose to young water enthusiasts.

Keywords

water, sanitation, hygiene

Eleanor Allen: On a Mission to Provide Safe Water for Everyone, Forever

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ABSTRACT

Eleanor Allen is a global water expert dedicated to helping millions of people access the safe and sustainable water and sanitation services needed to save lives, stay healthy, earn more money, and thrive. Eleanor is fiercely passionate about improving the state of the world with respect to water and sanitation. She has dedicated her career to this goal, first as a Peace Corps volunteer in the Dominican Republic, then as a consulting engineer (at CH2M/Jacobs and Arcadis), and now as the CEO of Water For People. Eleanor has lived and worked all over the world. As a professional civil engineer, business executive, and CEO, she has led large global and regional operations, managed projects and programs, developed business and raised funds, and designed water and wastewater treatment plants. Eleanor believes that societal change can be accelerated through social entrepreneurship and the efforts of organizations like Water For People. This article tells the story of Eleanor's inspirational life and career journey, provides technical aspects of her current work, and shares her encouraging message on living life with a purpose to young water enthusiasts.



Eleanor visiting a new water supply system and toilets at a school in Nicaragua

BACKGROUND AND EARLY CAREER

"You can't really plan your career. You can have ideas of where you want to go yet life also has twists and turns in store for you. Keeping an open mind to new opportunities as doors open, and taking the risk of walking through those doors, can have a major impact on your life journey."

—Eleanor Allen

Interests in Photography and Engineering

Eleanor was born to an engineer father and artist mother. They endowed her with an active right and left brain. When it was time to apply to university, she submitted applications to both art and engineering schools. Eleanor wanted to be a photographer, yet she was also encouraged by her parents to apply to engineering school (coming from a family of engineers). Her parents framed it as "two doors

to walk through” and suggested she walk through the engineering door first — likely a harder challenge and a more stable career path. And that is what she did. Eleanor jokingly said, **“There I was, struggling in my freshman year of engineering school, good at math and science but not in love with them, without any idea what a career in engineering could be. My coping mechanism was to fantasize about being a photographer. Yet I persevered and didn’t change course.”** When she entered her sophomore year at Tufts University, Eleanor realized that she loved her science classes the most. Fortunately, she realized she could get a dual degree in civil engineering and environmental science and the rest is history.

Eleanor decided to study abroad for her junior year. Tufts had various programs available for engineers, but she decided she wanted to go to the Technical University at Delft in the Netherlands. It was known for its strong civil and hydraulic engineering curriculum. She thought studying in Dutch would not be an issue since she has done a gap year in Flemish-speaking Belgium between high school and university. She took a leave of absence from Tufts University and enrolled at TU Delft. She naively underestimated her ability to follow technical lectures in Dutch! However, she quickly increased her vocabulary and understanding of the language and received full credit for the year abroad. In her senior year at Tufts, she took all water-related courses, which set the path for her future career.

Hydraulic Engineering to Peace Corps

Eleanor’s first job in civil engineering was doing physical hydraulic modeling of the Columbia River hydroelectric dams and large pump stations. She picked the job based on two serendipitous events: 1) A woman named Susan Allen did a talk at Tufts about her career as an epidemiologist. Eleanor really liked her (plus she had a great last name) and approached her after the talk and asked her where she worked. The firm was ENSR (now part of AECOM). 2) Eleanor asked if ENSR had an office in Seattle (she had already decided to move there). Sure enough, they did, and coincidentally that office had a hydraulic model shop. Perfect!

While Eleanor worked in hydraulic engineering, she continued following her life-long dream of joining the Peace Corps. Eleanor married her high school sweetheart, and they applied to join the Peace Corps together. They were placed as water and sanitation volunteers in the Dominican Republic.

Eleanor’s Peace Corps experience of living at the level of most of the world’s population in a low/middle income country greatly influenced her thinking and worldview. A pivotal moment in the DR for Eleanor in her was the realization of the profound impact of the double-edged sword of water — it can bring life and death. You cannot live without it, but if it is contaminated, it can be deadly. She witnessed its ability to kill people she knew and loved. She speaks about this in her TEDx talk on Why Water Is A Women’s Issue. After Peace Corps, Eleanor went directly to graduate school

and received a master’s degree in Civil and Environmental Engineering from the University of California at Berkeley. Today she is a distinguished alumna of the university.

Peace Corps to Consulting

“In grad school I chose to focus on wastewater treatment. I wanted to clean-up water. After Peace Corps I was really motivated about using engineering to help people. Improving the quality of life for people became more important to me than designing pump stations.” After earning her master’s degree, Eleanor went to work for the consulting firm CH2M HILL (now Jacobs) where she spent 17 successful years. Eleanor was fortunate to have excellent mentors and was exposed to a large variety of learning opportunities. She worked on designs of many water and wastewater treatment plants, managed small and large projects and programs, was responsible for local and regional business operations, and was actively engaged in business development.

Over the years at CH2M HILL, Eleanor was offered several relocations (five in 15 years including CA, WA, PR, CO, and Brazil) to work on specific projects and programs. She welcomed both the business and multi-cultural aspects of her various roles. She adds, **“I loved working on technical challenges while also helping bridge people and cultures. Being a facilitator and connector between engineers and clients was exciting.”** Eleanor gained significant Latin American and US experience in water while working at CH2M HILL. In addition, she had a special role for two years as the Chief of Staff to the CEO. This invaluable role gave her insights into the business aspects of running a \$6B company that she would never have learned while working on water projects. Eleanor left CH2M HILL and moved to Arcadis in 2013. At Arcadis, Eleanor was the Global Director of Water — a \$450M business across seven regions. These two consulting experiences equipped her well for becoming a CEO. She is also a member of the American Water Works Association, Water Environment Federation and a WEF Fellow, and the International Water Association.

Consulting to Nonprofit

Eleanor’s career ambitions went as far as running a global water business. However, once she got there, she realized it was not her forever job. What next? She had worked as a consultant most of her professional life and had never thought of doing anything else, yet she was open to possibilities. Before she even began looking for a job, she saw a position advertised on LinkedIn for the CEO of Water For People. It was like a lightning bolt hit her. Could this be her dream job? Her intuition told her to apply. She spoke with a couple trusted advisors to be sure she was not crazy or having a mid-career crisis (maybe she was?). They encouraged her to go for it.

Eleanor knew about Water For People since she joined CH2M HILL in 1997 because one of Water For People’s founders was her colleague, Ken Miller. Early in her career Eleanor volunteered at Water For People. When she applied for the CEO role

in 2015 the opportunity was right for her and for Water For People. The board of directors was looking for someone with global business experience that understood the water/wastewater industry, which was still a major partner of Water For People. Eleanor was in the right place at the right time.

She has no regrets as she looks back today at that decision that was a major pivot in her career. **“My five plus years at Water For People have been amazing. I am honored to lead such a highly respected organization. The non-profit sector is different, of course, than the private water sector. However, we are still connected. My former competitors in consulting are Water For People supporters. We represent work that they also believe in — helping provide lasting quality water and sanitation services for vulnerable populations around the world. It is a mission we can work on together.”**

Interestingly, twenty-five years since Eleanor left the Peace Corps, she has come full circle to community-based work. She is again focused on rural water projects after spending years working on water/wastewater mega-infrastructure for big cities around the world. Water For People is best-in-class at helping develop sustainable services — not just water access. This is key to solving the global water crisis.

Eleanor is proud of the work that Water For People does and feels she is making a greater impact than she did at times as a consulting engineer. **“For many years I was a wastewater process engineer. I specialized in odor control systems. In essence, I was designing the frosting on the cake. Odor control is high-end engineering for high-income countries. Its sole purpose is that no one sees or smells the wastewater treatment plant. Success of the design in creating an environment to make the surrounding neighbors feel as if this other marvel of engineering (the wastewater treatment plant) doesn’t exist. In contrast the engineering we do at Water For People is visible, life-changing, and rewarding. I feel as if I am using my skills to make a more significant difference in the world.”**

Career pivots are not always easy. Eleanor’s transition from the private sector to nonprofit came with its challenges. One of the greatest differences is fundraising vs. winning a contract. Every day is a fundraising day. There is never a break, and it is hard work. There is a team at Water For People that is dedicated to fundraising yet it is also a key part of Eleanor’s role as CEO. And success or failure often depends on winning over someone’s heart. This is a stark difference from engineering project proposals, which are based on qualifications, skills, and sometimes price. Contract procurement has black and white selection criteria, whereas fundraising is grey. Another challenge/difference/opportunity is that employees that choose to work at nonprofits often come for the mission — not for the pay. Processes and decisions are more consensus based, the pace is slower, and sometimes ideology is more important than operational efficiency. This is all quite different from the private sector.

WATER FOR PEOPLE

The idea behind Water For People came from Ken Miller (CH2M HILL — now Jacobs), Wayne Weiss (Black & Veatch), and John B. Mannion (AWWA). They had spent their entire careers working in water and wastewater. They each believed it was possible for everyone in the world to have access to safe water and sanitation services. In 1991, these three men came together with others in the industry to create Water For People. Today, Water For People continues to rely on strong ties to professionals in the water/wastewater industry as well as strong partnerships with AWWA, WEF, and IWA.

Water For People’s mission is to promote the development of high-quality drinking water and sanitation services, accessible to all, and sustained by strong communities, businesses, and governments. Water For People has evolved and grown significantly since 1991. Today its operating revenue is \$23M and its programs will reach 4 million people in nine countries in 2021 with lasting quality water and sanitation services. Water For People currently has 220 employees and 180 are not in the United States.

What makes Water For People different from other water nonprofits?

- **FULL COVERAGE:** This means reliable and lasting water and sanitation services for every family, clinic, and school in a district — even the most vulnerable, marginalized, and hardest-to-reach.
- **FOCUS ON SUSTAINABILITY:** Water For People thinks about the long term from the beginning. We ensure districts can be independent from ongoing foreign aid and have reliable access to water and sanitation for generations.
- **CAPACITY-BUILDING & TRAINING:** Water For People ensures that when something breaks, someone has the capacity to fix it. We train governments and water committees on topics like tariff collection, maintenance, and water resources management.
- **CO-FINANCE:** Local governments and communities invest resources alongside Water For People for the construction phase and for water use. Everyone pays, so everyone has ownership of water services.
- **MONITORING & EVALUATION:** Water For People monitors service levels and sustainability annually, while training local partners to eventually do this themselves. This builds capacity for data-driven decision-making.
- **MARKET-BASED APPROACHES:** We work closely with local businesses and entrepreneurs to provide sanitation services and to operate and maintain water services. This helps create jobs.
- **REPLICATION & SCALE:** Replicating Everyone Forever in additional districts and countries will end the global water and sanitation crisis faster. We work with sector partners and national governments to spread this impact.

Water For People Programs

The Water For People impact model “Everyone Forever” is making a profound impact in its nine operating countries (Bolivia, Guatemala, Honduras, India, Malawi, Nicaragua, Peru, Rwanda, and Uganda). “Everyone” means every family, clinic, and school has access to water and sanitation services. “Forever” is about building and supporting reliable service authorities and service providers to keep the water flowing. The details of the model are described in this paper: *Everyone Forever - Water For People’s WASH System-Strengthening Model*. Water For People’s programs are aligned with United Nation’s Sustainable Development Goal 6 — *ensure availability and sustainable water and sanitation management for all* — by 2030 (UNSDG 6).

The areas in which Water For People works are generally rural and peri-urban slums. There are no sewers and minimal water distribution systems. Everyone Forever means focusing on protecting water supplies and managing water resources, training mechanics, and establishing supply chains for parts. It entails long-term programs that change the overall system of water and sanitation service delivery through influencing and advocating for national water policies, regulations, and standards, and creating local water and sanitation offices. In this context, Water For People is supporting the strengthening of the water and sanitation sector. This includes participating in global and national networks (e.g., SWA, GWP, Agenda For Change, RASNIC, WESNetwork, etc.) and working with national ministries (Ministry of Infrastructure, Ministry of Water and Environment, Ministry of Environment and Water, etc.) national regulators (SUNASS, etc.), and national water and sanitation/sewerage utilities (CONASA, NWSC, WASAC, etc.).

Historically, Water For People worked in over 40 countries doing small projects that mostly broke down due to lack of proper maintenance and ownership. This all changed in 2010 when Water For People divested down to nine countries — those with the strongest relationships with government partners — and began developing the Everyone Forever impact model, which included providing access *and* sustainable services. It was radical and disruptive idea in the development sector at the time. Ten years later the Everyone Forever model is really working. Water For People is currently developing a new vision (called Destination 2030) and strategy that includes scaling and replicating Everyone Forever and adding new countries in its geographic reach.

Water For People is also scaling its work in health and hygiene services/education — especially post-COVID. Programs include education on water, sanitation, and hygiene in schools (WatSan Committees, Sanitation Clubs, Children’s Cabinets, social art for behavior change, etc.) including menstrual hygiene management. There is a specific part of SDG 6 for WASH in schools. Similarly, for health care facilities, WASH in health care facilities includes a focus on safe disposal of waste and hygiene training of doctors and health care workers.

Sanitation is a big growth area for Water For People. Market development for non-sewered sanitation products and services (e.g., toilets, latrine pit and septic tank emptying services, decentralized fecal sludge treatment plants, and biosolids reuse for cooking briquettes and compost) has grown tremendously over the past few years. Water For People also trains masons how to construct toilets (toilet slabs, bathrooms/superstructures, rings to line pits to prevent groundwater contamination, etc.). You can read more about these innovations in this article about Water For People’s Shitovation Fund. Specific innovations under development are a membrane system for pit toilets that separates liquids from solids in situ (India), household biodigesters (Guatemala), and rehabilitation of abandoned small town wastewater treatment plants (throughout Latin America). Innovations that have gone to scale are the SaTo Pan and the manual pit emptying pump called the Gulper (now 4th generation).

Creating New Jobs and a Professionalizing the Water Sector

One of the sustainable benefits of Water For People’s programs is the creation of new jobs. On the water side, there are temporary jobs available during the construction phase building the water distribution systems. Once the systems are in operation, there are permanent jobs for water sellers, maintenance of water systems (mechanics), operators of water systems, purveyors of spare parts across the supply chain, Water and Sanitation Office employees, etc. Water infrastructure (water supply, treatment, and distribution) includes numerous assets that are transferred to the municipality/district Water and Sanitation Office after commissioning. Water For People also helps Water and Sanitation Offices develop proper rates/tariffs to charge that cover the cost of service, repair, and replacement, and an asset management program.

Sanitation work is more aligned with the private sector than the public sector. Since there are no sewers, there are not a lot of assets that are constructed and later transferred to the municipality or district (only the treatment plant, which is often built on municipal land). In order to increase safely managed non-sewered sanitation services, Water For People concentrates on helping entrepreneurs develop small businesses in the sanitation sector. The sanitation value chain includes jobs selling and constructing toilets and bathrooms, latrine pit emptying operating decentralized fecal sludge treatment plants, and creating biosolids reuse products for sale (e.g., briquettes and compost).

Working with microfinance institutions (MFIs) is a key part of the success of Water For People’s sanitation market development. **“We train bankers/lenders at MFIs to develop a water and sanitation product line as a home improvement loan. The MFIs need support on how to provide information to the homeowners on what products are available (via catalogues of different products), where to get them (hardware and building supply stores that sell toilets, sinks, showers, etc.), and the types of loans available (terms and interest rates).”**



Eleanor visiting a community water kiosk in Blantyre, Malawi, with the local Water Users Association



With the Water and Sanitation Child Cabinet at a school in West Bengal, India (left)



With Beatriz Alvarado, Peru Country Program, chatting in the kitchen with a resident in the district of Asunción (right)

Rapid Response during COVID-19

Global news about the importance of handwashing in preventing transmission of COVID-19 was one of the silver linings of COVID for the WASH sector. Suddenly the value of our work was highly visible. COVID-19 also unexpectedly stress-tested Water For People's model. Could water service delivery continue even during a pandemic? *Readiness-Response-Resiliency* became the mantra in the early days of COVID-19. **"Thankfully, the District WASH Offices were well prepared to respond rapidly to their community needs during COVID-19."** Eleanor explains. Response included: 1) working with Ministries of Health and local governments to educate communities about COVID-19 and the importance of maintaining good hygiene practices during these times; and 2) helping distribute personal protective equipment (PPE). **"We learned a lot from our colleagues in Africa. They were well versed in how to respond to epidemics like Ebola and moved very quickly"**. Fortunately, water system construction work never

stopped during COVID-19 in most counties as it is deemed an essential service. Now Water For People is focused on the lessons learned during the first year of COVID-19 and how to leverage those to be ready and resilient for the next epidemic/pandemic.

IMPACT OF GENDER IN THE VALUE OF WATER AND SANITATION

Men and women value water and sanitation services differently. Women are often the ones responsible for providing water to their families. The sometimes walk long distances just to fetch water. Therefore, they are more likely to know where their water comes from and more interested in water conservation and water resources management. It is a similar situation for sanitation. A nice toilet is also important for dignity and safety, especially for women and girls. Eleanor mentioned how women play a critical role in improving sanitation services. **"If you are a male health care worker and**

are doing a door-to-door survey, a woman alone in her home won't let you pass through the door. If you are a woman, you can go in, go to the kitchen, and gain a good understanding about household hygiene and sanitation. Women often make having a nice toilet a family priority."

Water For People's programs include equity and inclusion. Women are encouraged to participate in trainings, whether they be for pump mechanics or water committee finances. It is also important to have women in leadership roles, such as serving on water and sanitation committees, so that they can participate in decision making and are role models in their communities. Lastly, inclusion is also about making provisions for the disabled to be able to access water points and toilets. This is an often-forgotten part of community planning.

Internally, Water For People incorporates JEDI (justice/equity/diversity/inclusion) into its culture, policies, and procedures. Issues and priorities vary in the eleven countries where Water For People has employees. For 2021, the JEDI workplan includes updating job descriptions and hiring processes to be less biased to attract more diverse candidates, ensuring diversity in collaborative cross-departmental working groups, training managers in more inclusive workplace culture (unconscious bias, microaggressions, etc.), shifting decision making power to be more inclusive, and providing resources for reading and learning on racial injustice issues globally. In addition, having a remote workforce due to COVID-19 offers new flexibility to hire the best candidates as employees can work from (almost) anywhere.

MESSAGE TO YOUNG WATER ENTHUSIASTS

If you have read this far, perhaps you are interested in a career in water. Eleanor has a few words of advice: **"Do it! Working in the water sector provides a platform for an amazing career."** Speaking from her years of experience, Eleanor thinks that the water sector provides a variety of avenues to explore that offer continuous learning and growth opportunities (e.g., water resources, water treatment, water policy, etc.). In addition, since the amount of water on the earth is finite, the demand for this precious resource will just keep growing. This offers job security in the sense that the sector will increase in complexity as the world's population grows. **"Humans continue to both exploit and protect water. The challenges keep growing in complexity. Our climate is getting hotter and extreme weather events include a greater frequency of floods, droughts, storms, etc. Greater complexity means there is a need for more smart people!"**

Eleanor's passion for her work shows when she says, **"One of the most exciting things about the work that Water For People does is that we are helping create a growing network of professionals that are passionate about water and sanitation around the world."** She reflects on her

journey saying **"I have had a great career. However, it was not without its challenges. The water/wastewater sector in the US is still male-dominated, conservative, and siloed. It is at times challenging for women and people of color to succeed. The careers we are helping develop outside the US have more gender parity, are more flexible and innovative, and the evolution of technology is moving faster. Hopefully, the next generation of water professionals will have even more opportunities than I had!"**



"Humans continue to both exploit and protect water. The challenges keep growing in complexity. Our climate is getting hotter and extreme weather events include a greater frequency of floods, droughts, storms, etc. Greater complexity means there is a need for more smart people!"

As a testimony to her passion and her career, Eleanor was recently inducted into the reputed and internationally acclaimed National Academy of Engineering. This is an incredible accomplishment especially considering less than 15% of the total workforce of engineers in the United States are women (Society of Women Engineers, 2019). Her message to young people? **"Follow your heart and intuition and see where they take you. You are in charge of your own destiny. If you really want something, tell others that you trust what it is so they can be your allies and advocate for you. The collective power of a few individuals can help you achieve your dreams."**

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